

# Multicentre Study about Nurses' Attitude to Delirium Patients

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## Abstract

**Objective:** The main goal of this research is to know a nurse's attitude to patients that may suffer delirium during the hospitalization time. A second goal is to analyze whether relative's visit time is a factor to be considered.

**Design:** Multicentre prospective and observational study.

**Methodology:** This study was performed in several hospitals that belong to the public sanitary health system of the Principado de Asturias (SESPA) and one hospital that belongs to Servicio Andaluz de Salud (SAS). The target populations are general hospitalization nurses, nurses specialized in intensive care, and relatives of patients admitted in intensive care units (ICU). As a tool we used a Likert questionnaire for validation of attitudes. This questionnaire included 20 questions about different situations that the nurses and relatives maintain in patients with delirium.

**Results:** 215 questionnaires were sent to the target population including 87.91% nurses and 12.09% patient's relatives. Cabueñes Hospital (SESPA)

returned the highest number of questionnaires (46.51%). Intensive care nurses returned the highest number of questionnaires (73.02%). We considered different assistant levels for ICU, that in mostly corresponded to levels III and IV. The analysis of the variables studied using a multiple regression linear model revealed that the answers to 9 out of 20 possible items were significantly different. Finally, the differences were highest in 3 of those 9 items.

**Conclusions:** Nurses don't find to the patients with delirium, of more interest than other types of patients, although they are highly concerned by their health before and after the delirium. Nurses are partially but not completely aware that delirium is a very serious illness. Nurses are not confident regarding whether the patient's relatives could calm down the patient and help him to overcome the disease. Given the heterogeneity of the answers there are no definitive conclusions regarding whether a change of the visit hours might be important in the recovery of patients with delirium.

**Key words:** Delirium, nursing, critical care, Emergencies Room, reanimation.

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## Introduction

Patients with multiple physical conditions are admitted to a hospital, a lot of them with serious diseases and not necessarily in ICU.

Delirium is a neuropsychiatric disorder most frequently seen in ICU. It occurs in 8 patients out of 10. In another patient's cohort in ICU [1,2] with less severe illness the frequency of delirium could be lower. Despite this prevalence, delirium remains unrecognized in

66-84% of severe ill patients, which correspond to 15-20% of the admissions to a hospital, especially in the elderly population and people with previous cognitive deterioration, associated to an increase in mortality.

The objective of this study is to value the attitude of the hospital's general population including the nurse staff and family; the latter case, inside the ICU environment.

We consider in special interest, to know the positive and negative attitudes of all the elements that are in contact in a more important way with the admitted patients who will potentially develop delirium (main objective). The family is the first social group in the health/illness process of its members. Every morbid process affecting one of its members, generally alters their stability, obligating them to adapt to the new situation. Sanitary services should assimilate the family as a key element in the patient's care. A patient's admission to an ICU involves a physical and psychological barrier to the family-patient relationship. With minor criteria, the same thing can occur in a general hospitalization level; however a second objective is to find out if a modification in the actual visiting regimen, including the ICU, could be a factor to consider.

## Methodology

### Design of the Study

The objective of this study is to value the nurse staff and the family's attitude to a patient with delirium in the ICU and in the rest of the hospital. The method applied to value the attitude was a questionnaire survey based on the Likert scale, which measures individual attitudes and predispositions in particular social contexts. It is known as "added scale" because the score of every analysis unit is obtained by adding the answers of each item. Because this scale has to be designed *ex profeso*, it is not a priori validated.

The scale has 20 items portraying a positive or negative attitude about stimulus. Each item has 5 possible answers: I completely agree (5); I agree (4); I'm not sure (3); I disagree (2); I completely disagree (1).

The analysis' unit corresponding to the scale, will rate the acceptance or rejection's degree.

This scale was adapted to this study, establishing the items according to the project's objective; and also adapting to the different collaborating populations. Which each questionnaire was also a written and oral explanation about interest and possible utility of the study and the way of complementation.

Based on developed items, a database based in RSIGMA (Babel) and Access (Microsoft) is made.

### Studied Population

The population sample, in which the study is based, is divided in two: Patient's family in ICU of Hospital de Cabueñes and nurse staff. The differences between them are the general hospitalization, reanimation and emergencies of Hospital de Cabueñes and ICU specialists in the next centers:

Hospital de Cabueñes (Gijón); Hospital Valle del Nalón; Hospital General de Jerez de la Frontera (Cádiz) and General Hospital, Instituto Nacional de Silicosis, Hospital Nuestra Señora de Covadonga that belongs to Hospital Central de Asturias (Oviedo).

### Variable Description

Used variables in this study are adapted to the different population groups. The 3 types of used tables are shown below (see attachments).

### Statistic Analysis

G-Stat 2.01 and RSIGMA BABEL are the statistic programs used. A quantitative and qualitative descriptive evaluation and a multiple linear regression analysis were considered to split the variables-answers more significant for attitude valuation. Between the possibilities of the statistic study, we decided to use absolute values to percentages to set in the answers in a diagram box (Diagrama de Caja, see the attachments) that can indicate with more accuracy where most of the answers are, and a better evaluation attitude. Quantitative descriptive values are considered and include mean, typical deviation, mode and median. 't'

from Student is used to value the significance about population age;  $p < 0.05$  being significant.

## Results

A total of 215 questionnaires were done and the 87.91% and 12.09% corresponds to the nursing staff and family members respectively. From the participating centers (**Table 1**), the majority of the answers were obtained from the hospital of Cabueñes with a 46.51%, followed by Nuestra Señora de Covadonga hospital with 23.72%.

**Table 1.** PERCENTAGE OF ANSWERS OF DIFFERENT ICUS

46.51%	Cabueñes Hospital
23.72%	Nuestra Señora de Covadonga Hospital
13.02%	General de Jerez Hospital
10.23%	General de Oviedo Hospital
4.19%	National Silicosis Institute

With the exception of Cabueñes hospital, where the answers come from the personnel of the ICU, hospitalization unit, emergency service, and surgical resuscitation; in the rest of the participating hospitals only the ICU personnel was considered, and to which the 73.02% from the total corresponds. The rest of the participation can be observed in **Table 2**.

**Table 2.** PARTICIPANT NURSING

73.02%	ICU nurse staff
14.81%	Hospital nurse staff
8.99%	ER nurse staff
3.17%	Surgery reanimation nurse staff

It has been considered that the different levels in ICU correlate to technical level, discerning 4 levels of assistance to critical patients going from a lesser level to a greater level [3]. 52.14% of the questionnaires correspond to level III. Respondent nurse staff's mean age was  $37.12 \pm 8.4$  years. There were no significant age differences

in ICU personnel ( $37.2 \pm 8$ ) or the hospitalization units ( $39.2 \pm 7$ ). Collaborating family members in the study had mean age of  $44.2 \pm 19.1$ . The family members had a lower response in the gathered information.

That is the reason why this study has centered in the data analysis regarding the nurse staff. All the following data is the one obtained from the nurse staff.

## Analysis

After analyzing all the variables using the multiple linear regression model we have obtained the next table (**Table 3**)

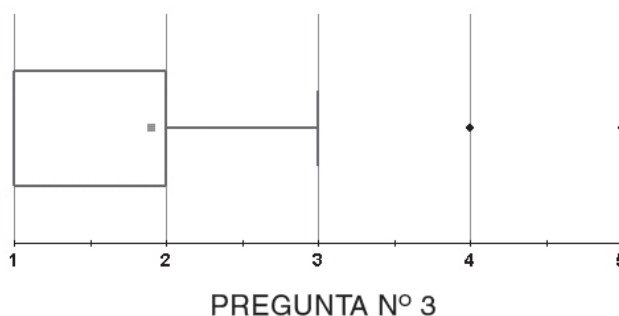
**Table 3. MULTIPLE LINEAR REGRESSION MODEL USED FOR DIFFERENT ANSWERS**

	Coefficient	<i>p</i> value ( <i>p</i> <0.05)*
Constant	1.6586	0.0008E-14
P1	-0.0100	0.6453
P2	0.0257	0.1433
P3*	0.0448	0.0087
P4	0.0210	0.1582
P5	-0.0171	0.4272
P6*	0.0529	0.0118
P7*	-0.0340	0.0446
P8	-0.0333	0.0744
P9	0.0056	0.7013
P10	0.0023	0.8805
P11	-0.0172	0.2214
P12*	0.0581	0.0010E-1
P13*	-0.0310	0.0343
P14	-0.0166	0.3481
P15	-0.0187	0.3400
P16*	0.0344	0.0333
P17*	-0.0448	0.0122
P18*	-0.1051	0.0010E-5
P19*	-0.0873	0.0003E-3
P20	-0.0053	0.6732

The regression analysis was done with the answer variable of the surveyed population, including family members. Significant differences were appreciated in the answers to 9 questions analyzed in the following paragraphs.

Regarding question #3 (see **Attachments** or “Pregunta N° 3”), the observed tendency is contained in this data: the answer’s mean of  $1.90 \pm 0.97$  as observed in graphic #1. This means that the nurse staff personnel tend not to sustain the same voice tone towards the patient that is in a psychomotor agitation situation.

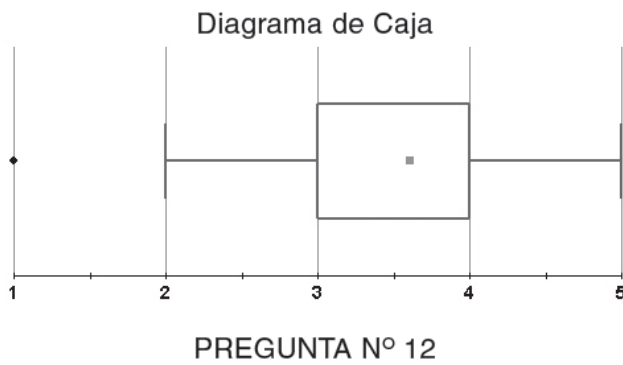
In question #6, the obtained answer is situated in  $4.04 \pm 0.77$ . This means that nurses show a comprehensive attitude to the patient.

**Diagrama de Caja**

In relation to question #7 (see **Attachments** or “Pregunta N° 7”), the given answer is  $3.46 \pm 0.94$ , which means that when the time comes to determine if they should call the attending physician to sedate or anesthetize the patient, they are not really sure, although it reflects certain tendency to follow this option.



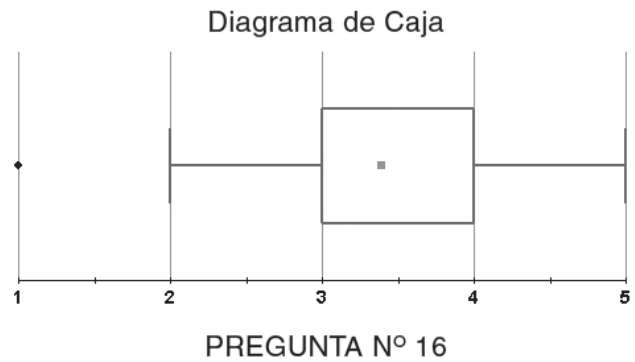
In question #12 (see **Attachments** or “Pregunta N° 12”), the answer obtained is  $3.61 \pm 1.03$ , which indicates that the nurse staff considers the agitated patient as a critical patient to whom they have to give non-medical assistance, though not in an absolute way, because a percentage of the nurse staffs are not quite sure about their answer.



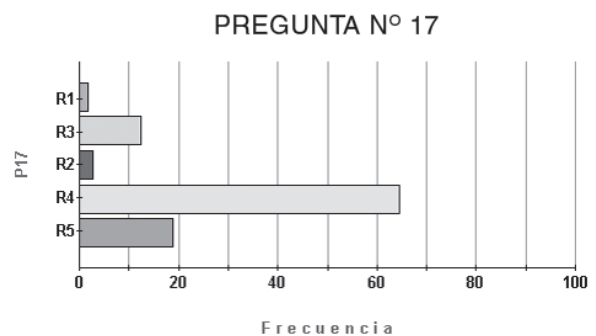
Regarding question #13 (see **Attachments** or “Pregunta N° 13”) the given answer is  $2.33 \pm 0.88$ , this shows that to the nurse staff, this kind of patients are not more interesting than others. In



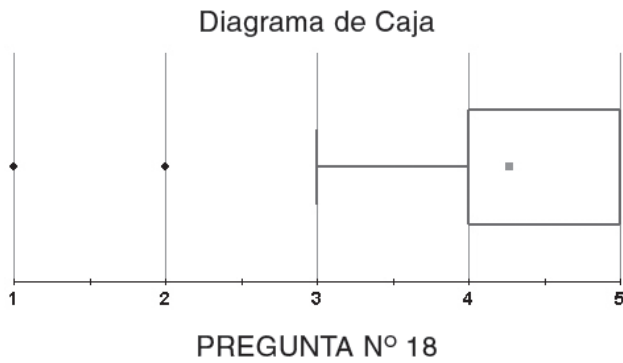
answer to question #16 (see **Attachments** or “Pregunta N° 16”) is  $3.39 \pm 0.97$ , indicating that most part of the nurses are not really sure whether they would patiently wait until this kind of patients calm down.



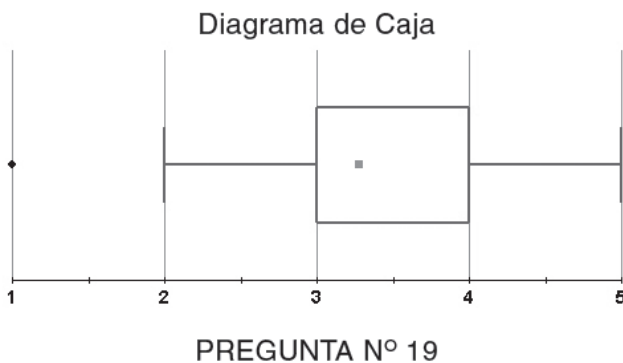
In question #17 (see **Attachments** or “Pregunta N° 17”), the obtained answer is  $3.96 \pm 0.75$ , meaning that most part of the nurse staff agrees in the decision to overtake the situation to manage the patient’s issue. We have considered adding a bar chart with percent values, because the diagram shows an absolute value.



The given answer to question #18 (see **Attachments** or “Pregunta N° 18”) is  $4.26 \pm 0.86$ , showing an agreement between the nurses regarding the same concern about this patient’s health before and after the agitation is set.



In question #19 (see **Attachments** or “Pregunta N° 19”) the given answer is  $3.28 \pm 0.91$ , demonstrating that the nurse staff is not sure whether the patient’s family can calm down the patient and help him get through the crisis or not.



In question #20 (see **Attachments** or “Pregunta N° 20”), although the statistics show no significant differences, we believe relevant to consider it. Given the importance that adds up to the ICU visit issue. So an answer mean of  $3.00 \pm 1.60$  is obtained, indicating that the nurse staff attitude regarding the visit regimen varies; leaving multiple answers to this question.



## Conclusions

The objective of this study was to determine the general population’s attitude towards the patient with possible delirium. This general population was articulated by the nurse staff and family members in contact with the patient. The most numerous populations were the nurse staff, delivering the majority of the questionnaires.

The hospital’s nurse staff is in contact with patients that can potentially develop delirium, most of them being critical patients; therefore, an adequate comprehension of the issue might help us provide a better care to these patients.

After analyzing the different results, we consider that these kinds of patients are not more interesting than others to the nurse staff, although they show their concern about them before and after the delirium is set.

The nurse staff shows a comprehensive attitude towards the agitated patient, although they are not so sure about notifying the physician so they proceed to sedate them. Most part of the nurse staff agreed with this last option.

The nurse staff is not completely aware that the patient with delirium is a critical patient, and they are not sure whether they would patiently wait until they calm down. They are also not sure if the patient’s family could calm the patients

down and help them to get through the crisis, which could lead to a hypothetic management or modification of the visit hours, essentially in the ICU, where the nurse attitude toward this issue varies considerably.

Given the heterogeneity of the results, we consider that when patients are admitted to a hospital, their delirium status could unperceived, and knowing the mortality rate of these patients according to many studies [4], this would perpetuate such mortality, therefore an early identification and treatment of the patients with delirium is overriding.

## Attachments

Likert questionnaire for ICU nurse staff

<b>Nurse staff's attitude towards a patient with psychomotor agitation</b>	<b>I completely disagree</b>	<b>I disagree</b>	<b>I am not sure</b>	<b>I agree</b>	<b>I completely agree</b>
1. Do you use kind words to calm down a patient	1	2	3	4	5
2. Do you usually answer the patient the same way he/she answers you?	1	2	3	4	5
3. Do you use the same voice tone as the patient's?	1	2	3	4	5
4. If you get hit by a patient, do you usually tie him?	1	2	3	4	5
5. If the patient offends you, do you feel that you have to do the same thing?	1	2	3	4	5
6. Do you have a comprehensive attitude towards the patient?	1	2	3	4	5
7. Do you usually notify the attending physician to sedate the patient?	1	2	3	4	5
8. Do you usually decide to avoid the patient during your shift?	1	2	3	4	5
9. Do you let the patient's family in first, to calm the patient down?	1	2	3	4	5
10. If the patient is tied down, do you turn away unless the patient unties again?	1	2	3	4	5
11. Do you dislike this kind of patients?	1	2	3	4	5
12. Do you consider the patient to be critical and give him/her all kind of non-medical assistance?	1	2	3	4	5
13. Is this patient's issue more interesting than other patient's?	1	2	3	4	5
14. Do you clearly understand the reason of the patient's agitation?	1	2	3	4	5
15. Do you avoid the assistance for this patient in the future?	1	2	3	4	5
16. Do you patiently wait until the patient calms down?	1	2	3	4	5
17. Do you try to manage the situation to help the patient get through the crisis?	1	2	3	4	5
18. Do you concern about this patient's health the same way you did before the agitation crisis?	1	2	3	4	5
19. Do you relieve that the patient's family can calm him/her down and help the patient get through the crisis?	1	2	3	4	5
20. Do you consider two ½ hour family visits per day enough?	1	2	3	4	5

Family's questionnaire

Family's attitude towards a patient with psychomotor agitation	I completely disagree	I disagree	I am not sure	I agree	I completely agree
1. If the crisis occurs during your visit, do you try to calm the patient down?	1	2	3	4	5
2. Before you try to talk to the patient, do you usually notify the nurse staff so they calm down the patient?	1	2	3	4	5
3. Do you keep the same voice tone as the patient to calm him/her down?	1	2	3	4	5
4. If you get hit by the patient, do you call the nurse staff to have him/her tied?	1	2	3	4	5
5. If the patient offends you, do you feel that you have to do the same thing?	1	2	3	4	5
6. Do you have a comprehensive attitude towards the patient?	1	2	3	4	5
7. Do you call the nurse staff to have the patient sedated?	1	2	3	4	5
8. Do you decide to avoid the patient in the future?	1	2	3	4	5
9. Do you think that it is better not to be in the room during an agitation crisis?	1	2	3	4	5
10. If the patient is tied to the bed, do you look away because you cannot stand to look him/her like that?	1	2	3	4	5
11. Do you relieve that being tied to the bed has worsened his condition?	1	2	3	4	5
12. Do you understand that your relative is a critical patient and so you try to encourage him/her?	1	2	3	4	5
13. Do you understand that this kind of issue is not because of his actual condition, but because of a bad assessment?	1	2	3	4	5
14. Entiende el problema de la agitación de su familiar, porque cree que esta usted con el.	1	2	3	4	5
15. You avoid to see the patient throughout the rest of the day	1	2	3	4	5
16. Espera pacientemente a que se tranquilice	1	2	3	4	5
17. Do you think that two ½ hour visits per day is enough?	1	2	3	4	5
18. Do you believe that if you would have been with the patient for the whole day, the agitation crisis would not have happened?	1	2	3	4	5
19. You want the visit hour to end fast so you can forget about the issue	1	2	3	4	5
20. Do you believe that the family can calm down the patient and make him/her go through the crisis?	1	2	3	4	5
21. Do you currently have a relative admitted to the ICU?	YES	NO			
22. If your answer is YES to the last question, would you please write the kind of kinship?	Please write here your kinship to the patient. Wife or husband, daughter or son, mother or father, aunt or uncle, grandson or granddaughter, grandparents, etc...  Write here: .....				

Questionnaire for general hospitalization, reanimation and ER nurses

<b>Nurse staff's attitude towards a patient with psicomotor agitation</b>	<b>I completely disagree</b>	<b>I disagree</b>	<b>I am not sure</b>	<b>I agree</b>	<b>I completely agree</b>
1. Do you use kind words to calm down a patient?	1	2	3	4	5
2. Do you usually answer the patient the same way he/she answers you?	1	2	3	4	5
3. Do you use the same voice tone as the patient's?	1	2	3	4	5
4. If you get hit by a patient, do you usually tie him?	1	2	3	4	5
5. If the patient offends you, do you feel that you have to do the same thing?	1	2	3	4	5
6. Do you have a comprehensive attitude towards the patient?	1	2	3	4	5
7. Do you usually notify the attending physician to sedate the patient?	1	2	3	4	5
8. Do you usually decide to avoid the patient during your shift?	1	2	3	4	5
9. Do you let the patient's family in first, to calm the patient down?	1	2	3	4	5
10. If the patient is tied down, do you turn away unless the patient unties again?	1	2	3	4	5
11. Do you dislike this kind of patients?	1	2	3	4	5
12. Do you consider the patient to be critical and give him/her all kind of non-medical assistance?	1	2	3	4	5
13. Is this patient's issue more interesting than other patient's?	1	2	3	4	5
14. Do you clearly understand the reason of the patient's agitation?	1	2	3	4	5
15. Do you avoid the assistance for this patient in the future?	1	2	3	4	5
16. Do you patiently wait until the patient calms down?	1	2	3	4	5
17. Do you try to manage the situation to help the patient get through the crisis?	1	2	3	4	5
18. Do you concern about this patient's health the same way you did before the agitation crisis?	1	2	3	4	5
19. Do you relieve that the patient's family can calm him/her down and help the patient get through the crisis?	1	2	3	4	5
20. Are you an ICU nurse, hospitalization nurse, reanimation nurse or ER nurse?	ICU	General hospitalization	Reanimation	ER	
21. Do you consider two ½ hour family visits per day enough?	1	2	3	4	5
22. If you are a hospitalization or ER nurse: Do you relieve that the family visitation regimen is enough?	1	2	3	4	5

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